

CLAIMS

I claim:

1 1. A liquid fertilizer injector system attached to a
2 source of water by a water source line, the system comprising:

3 an inlet line adapted for attachment to the water source
4 line;

5 a holding tank connected to the inlet line;

6 a collapsible impermeable bag that is filled with liquid
7 fertilizer disposed within the holding tank;

8 an outlet line connected between the bag and the water
9 source line downstream from the input line;

10 a port position indicator valve disposed in the outlet line
11 for incrementally controlling the flow of liquid fertilizer from
12 the outlet line back to the water source line; and

13 a drainage valve to drain and release any input water in
14 the holding tank from the liquid fertilizer and injection
15 system;

16 wherein pressure from water entering the tank from the
17 water source line compresses the bag to force liquid fertilizer
18 through the output line and into water flowing in the water
19 source line for subsequent dispersion.

1 2. The system according to claim 1, wherein the port
2 position indicator valve has a fully closed position, a 3/4ths
3 closed position, a 1/2 closed position, a 1/4th closed position
4 and a fully open position.

1 3. The system according to claim 1, further comprising a
2 combination union connection and injector valve adapted for
3 connection to the water source line, the outlet line being
4 connected to the injection valve.

1 4. The system according to claim 1, wherein the drainage
2 valve has an open position for draining water from the tank.

1 5. A liquid fertilizer injector system attached to a water
2 source line, comprising:

3 an inlet line adapted for connection to the water source
4 line;

5 a mixing tank connected to the inlet line,

6 a feeding chamber connected to the tank, the feeding
7 chamber being adapted for adding liquid fertilizer to the
8 mixing tank for mixing with water from the inlet line;

9 an agitator disposed in the mixing tank;

10 an outlet line connected to the mixing tank and adapted for
11 connection to the water source line downstream from the input
12 line; and

13 a port position indicator valve disposed in the outlet line
14 for incrementally controlling flow of the water and liquid
15 fertilizer mix in the outlet line.

1 6. The system according to claim 5, wherein the port
2 position indicator valve has a fully closed position, a 3/4ths
3 closed position, a 1/2 closed position, a 1/4 closed position
4 and a fully open position.

1 7. The system according to claim 5, further comprising a
2 combination union connection and an injector valve adapted for
3 being disposed in the water source line downstream from the input
4 line, the output line being connected to the injector valve.

1 8. A method for operating a liquid fertilizer injector
2 system using liquid fertilizer with water and a water source,
3 comprising the steps of:

4 receiving the water from the water source;

5 combining the water with the liquid fertilizer from
6 within the liquid fertilizer injection system;

7 distributing the liquid fertilizer;

8 controlling the flow of the liquid fertilizer from the
9 liquid fertilizer injection system; and

10 maintaining the liquid fertilizer injection system as
11 needed.

1 9. The method according to claim 8, wherein combining the
2 water with the liquid fertilizer from within the liquid
3 fertilizer injection system, further comprises the additional
4 step of allowing the water to exert pressure on the liquid
5 fertilizer that is kept in a collapsible impermeable bag within
6 a holding tank.

1 10. The method according to claim 8, wherein controlling
2 the flow of the liquid fertilizer from the liquid fertilizer
3 injection system, further comprises an additional step of using
4 an incremental port position indicator valve for controlling the
5 flow of the liquid fertilizer.

1 11. The method according to claim 8, wherein maintaining
2 the liquid fertilizer injection system as needed, further
3 comprises an additional step of draining any water from the
4 liquid fertilizer injection system when the collapsible
5 impermeable bag is emptied.

1 12. A method for operating a liquid fertilizer injector
2 system using liquid fertilizer with water and a water source,
3 comprising the steps of:

4 receiving the water from the water source;
5 reacting the water with the liquid fertilizer from
6 within the liquid fertilizer injection system;
7 distributing the liquid fertilizer and water;
8 controlling the flow of the liquid fertilizer and
9 water from the liquid fertilizer injection system; and
10 maintaining the liquid fertilizer injection system as
11 needed.

1 13. The method according to claim 12, wherein combining
2 the water with the liquid fertilizer from within the liquid
3 fertilizer injection system, further comprises an additional
4 step of the water reacting with the liquid fertilizer in an
5 agitated mixing tank.

1 14. The method according to claim 12, wherein controlling
2 the flow of the liquid fertilizer and water from the liquid
3 fertilizer injection system, further comprises an additional
4 step of using an incremental port position indicator valve for
5 controlling the flow of the liquid fertilizer and water.